

REMARKS

Applicant respectfully requests reconsideration and allowance of the claimed subject matter. Claims 1, 5, 18, 33, 51, 60, and 69 are amended. Claims 1-22, 33-53, 55-64, and 69-84 are pending.

Applicant thanks the Examiner for the detailed analysis presented in the July 2, 2005, Office Action.

Claim Objections

The Office Action noted objection to claim 5 because of informalities. More specifically, in reciting its dependency on claim 1, claim 5 included the words "Error! Reference source not found." Claim 5 has been amended to remove the objected-to language. In view of this amendment, withdrawal of the objection to claim 5 is respectfully requested.

Claim Rejections under 35 U.S.C. § 102

Claims 1-22, 33-53, 55-64, and 69-84 are rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,893,133 to Chen (hereinafter, "Chen"). Applicant respectfully traverses the rejection.

As recited in the subject application and applicant's previous response, the subject application includes an error tolerant spelling tool accepts the native word (even if it is misspelled or mistyped) and attempts to derive the most probable non-native word for the given context. The spelling tool utilizes a bilingual dictionary to determine possible non-native word translation candidates. These candidates are passed to a non-native language model (e.g., a trigram language model) and a translation model. The non-native language model generates

1 probabilities associated with the candidates given the current sentence or phrase
2 context. The translation model generates probabilities of how likely a native word
3 is intended given the non-native word candidates. From these probabilities, the
4 spelling tool determines the most probable non-native word translation. The
5 writing wizard substitutes the non-native word for the native input string. To the
6 user, the substitution takes place almost immediately after entering the native input
7 string.

8 If the user likes the non-native word, the user may simply continue with the
9 sentence. On the other hand, if the user is still unsure of the non-native word, the
10 user can invoke more assistance from the writing wizard. For instance, the writing
11 wizard has a sentence recommendation tool that allows the user to see the non-
12 native word in a sentence context to learn how the word can be used. A window
13 containing example bilingual sentence pairs is presented to the user so that the
14 user can learn how the non-native word is used in the sentence and see the
15 corresponding sentence written in the native language. In addition, the wizard can
16 present a list of other native word translations of the input string, as well as a list
17 of other non-native word candidates. The user can select any one of these words
18 and review the selected word in a sample pair of bilingual sentences. In this
19 manner, the spelling tool and sentence recommendation tool work together in a
20 unified way to greatly improve the productivity of writing in a non-native
21 language.

22 The Office Action responds with particularity to claims 1-16, and rejects
23 claims 17-22, 33-53, 55-64, and 69-84 on the basis that the latter claims are
24 similar in scope and content to claims 1-16. Applicant collectively responds to the
25 rejection of claims 1-17, 18-22, 51-59, 60-68, and 69-75. Applicant individually

1 responds to each of the groups of claims including claims 33-41; claims 42-50 and
2 84; and claims 76-79 and 80-83.

3 As a preliminary matter, applicant does not separately address the
4 patentability of each remaining dependent claim in detail. However, applicant's
5 decision not to discuss the differences between the cited art and each dependent
6 claim should not be considered as an admission that applicant concurs with the
7 Examiner's conclusion that these dependent claims are not patentable over the
8 disclosure in the cited references. Similarly, applicant's decision not to discuss
9 differences between the prior art and every claim element, or every comment
10 made by the Examiner, should not be considered as an admission that applicant
11 concurs with the Examiner's interpretation and assertions regarding those claims.
12 Indeed, applicant believes that all of the dependent claims patentably distinguish
13 over the references cited. Moreover, a specific traverse of the rejection of each
14 dependent claim is not required, since dependent claims are patentable for at least
15 the same reasons as the independent claims from which the dependent claims
16 ultimately depend.

17
18 **Claims 1-17, 18-22, 51-59, 60-68, and 69-75**

19 Claim 1, as amended, as representative of independent claims 18, 51, 60,
20 and 69 and rejected in kind in the Office Action, recites:

21 1. (Currently Amended) A method implementable by at
22 least one computing system for providing assistance to a non-native
23 speaker in preparing written text in a native language, comprising:
24 receiving non-native words of a non-native language and at
25 least one native word of a native language that are entered by a user;

1 identifying at least one non-native word corresponding in
2 meaning to the native word; and
3 converting the native word to a corresponding non-native
4 word.

5
6 In response to the rejection of claim 1, applicant respectfully offers three
7 points. First, as noted in the Examiner's "Responses to Arguments," the Examiner
8 notes that applicant referenced aspects of the invention not recited in the claims,
9 for example, "aiding a user to write in a non-native language." Applicant has
10 amended claim 1 to include this recitation.

11 Second, Chen discloses a system in which non-native words are not
12 translated. Although there is some indication that "mixed language/text" may be
13 entered, such as when "English or other non Chinese text is *included with the*
14 *Chinese text input*" (Chen, Column 7, Lines 8-10; emphasis added), Chen plainly
15 contemplates translating from a native language, such as Pinyin, to another
16 language. In fact, Chen expressly states that "[n]on Chinese text is also delimited
17 with *special* delimiters" (Chen, Column 7, Lines 14-15; emphasis added),
18 indicating that non-native text is treated differently than native text.

19 More significantly, non-native text is treated differently in that it is not
20 translated. Chen describes that "diacritics" used to set off non-native words are
21 "'no tone' diacritics . . . useful when 'mixed language text' is entered, i.e., English
22 or other non Chinese text." (Chen, Column 7, Lines 5-9.) Chen contemplates the
23 use of these special diacritics to ensure that words, such as English words or other
24 non Chinese text, are *not* translated:
25

1 "During further language processing, i.e., translation, analysis,
2 and/or printing, *diacritics demarking the accented syllables in a*
3 *syllable string and indicating the type of the tone of each accented*
4 *syllable, are used by the invention to parse the phonetic*
5 *representation (Pinyin) of Chinese into words and sentences.* (See
6 processes 500 and 600.) Rules are applied to parse the phonetic
7 representation by dividing the phonetic representation of the Chinese
8 sentence at the points where there are function words, particles,
9 and/or affixes. The system 1000 efficiently does this because there
10 are a relatively small number, i.e., under 100, of known and
11 identified function words (and particles/affixes) in each Chinese
12 dialect. Therefore, a relatively small amount of computer memory is
13 needed to store all useful function words and particles/affixes 800."

14 (Chen, Column 7, Lines 16-30; emphasis added.) Chen parses and thus translates
15 native language into a non-native language according to tone diacritics; thus, non
16 Chinese text such as English, which would be marked with "no tone" diacritics,
17 would not be translated.

18 Third, because Chen does not disclose translating non-native words, Chen
19 neither teaches nor suggests identification of at least one non-native word having a
20 corresponding meaning, as recited in claim 1 as amended. As previously
21 described, Chen expressly recites that special "no tone" limiters are used to set off
22 non-native words, and tones are used in translating words. (See Chen, Column 7,
23 Lines 14-15.) Because nothing is done to attempt translating the non-native
24 words, no native word having a corresponding meaning will be identified. Thus,
25 Chen neither teaches nor discloses identifying a non-native word having a
corresponding meaning, as recited in claim 1 as amended.

Thus, for these reasons, applicant submits that claim 1 is not anticipated by
Chen. Furthermore, because claims 2-17 are patentable for at least the same
reasons as the independent claim from which they depend and to which they add
additional features, applicant submits that claims 2-17 also are not anticipated by

1 Chen. Applicant requests that the rejection under 35 U.S.C. § 102 be withdrawn
2 against claims 1-17.

3 For the reasons states with regard to claims 1-17, applicant also asserts that
4 claims 18-22, 51-59, 60-68, and 69-75 also are patentable over the cited reference.
5 Thus, applicant requests that the rejection under 35 U.S.C. § 102 also be
6 withdrawn against claims 18-22, 51-59, 60-68, and 69-75.

7
8 **Claims 33-41**

9 Claim 33, as amended solely as a matter of form to include the conjunction
10 "and" between the third and fourth paragraphs, recites:

11 33. (Currently Amended) A method comprising:
12 receiving non-native words of a non-native language and at
13 least one native word of a native language, the native word being
14 received in a first form of the native language;
15 translating the native word from its first form to at least one
16 native word of a second form; and
17 translating the native word of the second form to at least one
18 non-native word.

19 The rejection of claims 33-41 is predicated on the assertion that claims 18-41 are
20 similar in scope and content to claims 1-16. However, applicant asserts that claim
21 33 is not similar in scope or content to claim 1, and thus claims 34-41 also are not
22 similar in scope and content to any of claims 2-16. Moreover, applicant
23 respectfully submits that the following point is not addressed by the Office Action.

24 In response to the rejection of claim 33, applicant respectfully asserts that
25 nothing in the cited reference describes "translating the native word from its first

1 form to at least one native word of a second form,” and then “translating the native
2 word of the second form to at least one non-native word.” Respectfully, such a
3 two-part translation of a native word is neither taught nor suggested by Chen.

4 In portions of Chen cited in the Office Action, Chen describes converting
5 Pinyin to Hanzi, *or* converting Pinyin to English. (*See* Chen, Column 6, Lines 26-
6 39.) However, Chen does not describe “translating the native word from its first
7 form to at least one native word of a second form,” and then “translating the native
8 word of the second form to at least one non-native word.” For sake of example,
9 nowhere does Chen describe converting a native word from Hanzi to Pinyin to
10 English, or Pinyin to Hanzi to English. Thus, because Chen not disclose all of the
11 elements claimed in claim 33, Chen cannot anticipate claim 33, and the Office
12 Action has not presented a *prima facie* case to support a rejection under 35 U.S.C.
13 § 102. For at least these reasons, withdrawal of the 35 U.S.C. § 102 rejection of
14 claim 33 is respectfully requested.

15 Claims 34-41 depend from claim 33 and are patentable for at least the same
16 reasons as claim 33. For at least this reason, and because claims 34-41 add
17 additional features to claim 33, withdrawal of the 35 U.S.C. § 102 rejection of
18 claims 34-41 is respectfully requested.

19
20 **Claims 42-50 and 84**

21 Claim 42, as amended, recites:

22 42. (Original) A method comprising:
23 enabling a user to enter non-native words of a non-native
24 language and a phonetic text string of a native language;
25

1 displaying the non-native words and the phonetic text string
2 within a common entry line;

3 translating the phonetic text string to at least one native word
4 of the native language;

5 determining possible non-native word candidates from the
6 native word of the native language;

7 generating first probabilities associated with the non-native
8 word candidates that indicate how likely individual non-native word
9 candidates were intended by the user given the context established
10 by previously entered non-native words;

11 generating second probabilities associated with the non-native
12 word candidates that indicate how likely the native word was
13 intended given individual non-native word candidates;

14 deriving a most probable non-native word from among the
15 non-native word candidates based on the first and second
16 probabilities; and

17 translating the native word to the most probable non-native
18 word.

19
20 The rejection of claims 42-50 is predicated on the assertion that claims 42-50 are
21 similar in scope and content to claims 1-16. However, applicant asserts that claim
22 42 is not similar in scope or content to claim 1, and thus claims 43-50 also are not
23 similar in scope and content to any of claims 2-16. Thus, applicant respectfully
24 submits that at least the following three points are not addressed by the Office
25 Action.

1 First, applicant respectfully asserts that nothing in the cited reference
2 describes generating first probabilities associated with the non-native word
3 candidates that indicate how likely individual non-native word candidates were
4 intended by the user given the *context* established by previously entered non-
5 native words. Second, nothing in Chen describes generating second probabilities
6 associated with the non-native word candidates that indicate how likely the native
7 word was intended given *individual* non-native word candidates. Third, nothing
8 in Chen teaches or suggests deriving a most probable non-native word from
9 among the non-native word candidates *based on the first and second*
10 *probabilities*. Respectfully, nothing cited in the Office Action, or anywhere else
11 in Chen, are any of these three elements taught or suggested, let alone are all of
12 them taught or suggested. Thus, because Chen not disclose all of the elements
13 claimed in claim 42, Chen cannot anticipate claim 42, and the Office Action has
14 not presented a *prima facie* case to support a rejection under 35 U.S.C. § 102. For
15 at least these reasons, withdrawal of the 35 U.S.C. § 102 rejection of claim 42 is
16 respectfully requested.

17 Claims 43-50 depend from claim 42 and are patentable for at least the same
18 reasons as claim 42. For at least this reason, and because claims 43-50 add
19 additional features to claim 42, withdrawal of the 35 U.S.C. § 102 rejection of
20 claims 43-50 is respectfully requested.

21 For the reasons already discussed with respect to claim 42, applicant
22 submits that claim 84 is also patentable over the cited reference, and applicant
23 requests that the rejection under 35 U.S.C. § 102 also be withdrawn against claim
24 84.
25

Claims 76-79 and 80-83

Claim 76 recites:

76. (Original) A cross-language writing architecture comprising:

a user interface to enable a user, who is accustomed to a native language, to enter non-native words from a non-native language; and

a sentence recommendation tool to suggest possible sentence structures in the non-native language.

The rejection of claims 76-79 is predicated on the assertion that claims 76-79 are similar in scope and content to claims 1-16. However, applicant asserts that claim 76 is not similar in scope or content to claim 1, and thus claims 77-79 also are not similar in scope and content to any of claims 2-16. Thus, applicant respectfully submits that at least the following point is not addressed by the Office Action.

Nowhere in the cited reference, either in the portions of the Office Action or in any other portion of Chen that applicant could find, does Chen describe a sentence recommendation tool to suggest possible sentence structures in the non-native language. As previously described, Chen translates words, based in part on specific tones identified by diacritics. (Chen, Column 7, Lines 5-9 and 16-30.) In fact, as indicated in FIGURE 4 of Chen and its description (Column 10, Line 56, through Column 14, Line 29), Chen describes translating from the native language to the non-native language *by syllables*. Respectfully, applicant asserts that nothing cited in the Office Action does Chen suggest a sentence recommendation tool as recited in claim 76. Thus, because Chen not disclose all of the elements claimed in claim 76, Chen cannot anticipate claim 76, and the Office Action has

1 not presented a *prima facie* case to support a rejection under 35 U.S.C. § 102. For
2 at least these reasons, withdrawal of the 35 U.S.C. § 102 rejection of claim 76 is
3 respectfully requested.

4 Claims 77-79 depend from claim 76 and are patentable for at least the same
5 reasons as claim 76. For at least this reason, and because claims 77-79 add
6 features to claim 76, withdrawal of the 35 U.S.C. § 102 rejection of claims 77-79
7 is respectfully requested.


8 For the reasons already discussed with respect to claims 76-79, applicant
9 submits that claims 80-83 also are patentable over the cited reference, and
10 applicant requests that the rejection under 35 U.S.C. § 102 also be withdrawn
11 against claims 80-83.

12
13 **Conclusion**

14 Claims 1-22, 33-53, 55-64, and 69-84 are in condition for allowance.
15 Applicant respectfully requests prompt allowance of the subject application. If
16 any issue remains unresolved that would prevent allowance of this case, the
17 Examiner is requested to contact the undersigned attorney to resolve the issue.

18
19 Respectfully Submitted,

20 Date: 11-30-2005

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